

AMENDMENTS TO THE CLAIMS

1. (Currently Amended): An electro-luminescence display device, comprising:
 - gate lines;
 - data lines crossing the gate lines;
 - pixel cells at crossings of the gate lines and the data lines;
 - a gate driver that sequentially applies a gate signal to the gate lines during one horizontal period; and
 - a plurality of data driving circuits that apply voltage signals to the pixel cells along a gate line during a first time within [[of]] the horizontal period and applying current signals to the pixel cells during a second time within the horizontal period after the first time ~~of the horizontal period~~.
2. (Original): The electro-luminescence display device according to claim 1, wherein the first time is shorter than the second time.
3. (Original): The electro-luminescence display device according to claim 1, wherein each of the plurality of data driving circuits includes:
 - a voltage driver that applies voltage signals to the data lines corresponding to image data; and
 - a current driver that allows the current signals corresponding to the image data to flow from the pixel cells.
4. (Original): The electro-luminescence display device according to claim 3, further comprising a gamma voltage driver that applies a plurality of gamma voltage levels to the voltage driver so as to generate the voltage signal.
5. (Original): The electro-luminescence display device according to claim 3, wherein the voltage driver includes:
 - a plurality of voltage driving blocks corresponding to each data line that generate a voltage signal corresponding to the image data; and
 - a plurality of first switches between each of the voltage driving blocks and each of the data lines, wherein the first switches are turned on by a control signal.

6. (Original): The electro-luminescence display device according to claim 5, wherein said current driver includes:

a plurality of current driving blocks corresponding to each data line that drive the current signal in response to the image data, said current driving blocks having i blocks; and

a plurality of second switches between each of the current driving blocks and each of the data lines and wherein the second switches are turned on by a control signal.

7. (Original): The electro-luminescence display device according to claim 6, wherein the control signal remains at a first level during the first time and remaining at second level during the second time.

8. (Original): The electro-luminescence display device according to claim 3, wherein the voltage signal is charged onto a storage capacitor in the pixel cell.

9. (Currently Amended): A method of driving an electro-luminescence display device, comprising:

applying a gate signal to pixel cells along a specific horizontal line during a horizontal period;

applying a voltage value corresponding to image data to the pixel cells during a first time within the horizontal period to pre-charge the pixel cells; and

applying a current value corresponding to the image data to the pixel cells during a second time within the horizontal period after the first time to display an image corresponding to the image data.

10. (Original): The method according to claim 9, wherein applying a voltage value and applying a current value are repeated every horizontal period.

11. (Original): The method according to claim 9, wherein the first time is less than the second time.

12. (Original): The method according to claim 11, wherein applying a voltage value includes

charging a storage capacitor.

13. (Currently Amended): A method of driving an electro-luminescence display device, comprising:

applying a gate signal from a gate driver during each horizontal period to select pixel cells along specific horizontal line;

applying a voltage value corresponding to image data from a voltage driver to the pixel cells during a first time within [[of]] the horizontal period; and

applying a current value corresponding to the image data to the pixel cells during a second time within the horizontal period after the first time.

14. (Original): The method according to claim 13, wherein applying the voltage value to the pixel cells includes selecting one of a plurality of gamma voltage values according to the image data to apply to the pixel cells.

15. (Original): The method according to claim 13, wherein the first time is less than the second time.

16. (Original): The method according to claim 14, wherein applying a voltage value includes charging a storage capacitor.

17. (Currently Amended): An electro-luminescence display device, comprising:

gate lines;

data lines crossing the gate lines;

pixel cells at crossings of the gate lines and the data lines;

a gate driver that sequentially applies a gate signal to the gate lines during one horizontal period; and

a plurality of data driving circuits having a voltage driver that applies voltage signals to the data lines corresponding to image data within the horizontal period and a current driver that allows the current signals corresponding to the image data to flow from the pixel cells within the horizontal period.

18. (Original): The electro-luminescence display device of claim 17, wherein the data driving circuits apply voltage signals to the pixel cells along a gate line during a first time of the horizontal period and apply current signals to the pixel cells during a second time after the first time of the horizontal period.

19. (Original): The electro-luminescence display device according to claim 18, wherein the first time is shorter than the second time.

20. (Original): The electro-luminescence display device according to claim 17, further comprising a gamma voltage driver that applies a plurality of gamma voltage levels to the voltage driver so as to generate the voltage signal.

21. (Original): The electro-luminescence display device according to claim 17, wherein the voltage driver includes:

a plurality of voltage driving blocks corresponding to each data line that generate a voltage signal corresponding to the image data; and

a plurality of first switches between each of the voltage driving blocks and each of the data lines, wherein the first switches are turned on by a control signal.

22. (Original): The electro-luminescence display device according to claim 21, wherein said current driver includes:

a plurality of current driving blocks corresponding to each data line that drive the current signal in response to the image data, said current driving blocks having i blocks; and

a plurality of second switches between each of the current driving blocks and each of the data lines and wherein the second switches are turned on by a control signal.